

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

October 31, 1991

D. B. Redington  
Director, Regulatory Management  
Monsanto Company  
800 N. Lindbergh Boulevard  
St. Louis, Missouri 63167

Dear Dennis:

You've asked us whether phosphoric rinse-acid from the aluminum anodizing operation described in your October 4, 1991 correspondence (attached) is a solid waste under federal law when used in the manufacture of fertilizer. Under our interpretation of the regulations (40 C.F.R. 261.2(c)(1)), it does not appear that the rinse-acid would be a solid waste when used in fertilizer production. In evaluating this issue, the Agency would adhere to its earlier statements on this matter (also attached). This is a narrow determination, however, limited to this particular material and facts, and should not be viewed as precedential. In addition, as you are aware, state laws and regulations in this area may be stricter than the federal rules and should be consulted as well.

Sincerely,

Steven Silverman  
Attorney  
Solid Waste & Emergency  
Response Division (LE-132S)

# **Monsanto**

Monsanto Company  
800 N. Lindbergh Boulevard  
St. Louis, Missouri 63167  
Phone: (314) 694-1000

October 4, 1991

Mr. Steve Silverman  
U. S. Environmental Protection Agency  
Fax at (202) 260-7102

Dear Steve:

Based on the attached transmittal, you have concluded verbally that phosphoric rinse-acid from the aluminum anodizing operation as I described it did not constitute a solid waste, and so was not subject to Subtitle C regulation if sold or used for the manufacture of fertilizer. I judge that this is so because rinse acid does not meet the definition of a "spent material":

“A ‘spent material’ is a material that has been used and as a result of contamination can no longer serve the purpose for which it was produced without processing.” (40 CFR 61.1(c))  
(Emphasis added.)

You have agreed to confirm your determination in a letter. I am providing this material to you, as requested, to that end.

Thank you for your help.

Respectfully yours,

D. B. Redington  
Director, Regulatory Management

# **Monsanto**

Monsanto Company  
800 N. Lindbergh Boulevard  
St. Louis, Missouri 63167  
Phone: (314) 694-1000

August 28, 1991

Mr. Steve Silverman  
U. S. Environmental Protection Agency  
Fax at (202) 260-7702

Dear Steve:

The documents that follow are the three 1986 letters which you and I have discussed relative to the phosphoric acid-for-fertilizer issue. This issue is an opportunity for us to do a bit of pollution prevention if we can find a way to do it under the rules.

The use of acid in the aluminum anodizing business is fairly well described in the May 19, 1986 letter from Mr. Daniel McCaskill to you. As I further understand the activity:

- We sell a refined grade of technical phosphoric acid, of about 80% H<sub>3</sub>P<sub>04</sub> content, to the aluminum anodizer.
- The anodizer makes rinsewater that is, in effect, a more dilute acid of about 45-50% H<sub>3</sub>P<sub>04</sub> content. While the acid is more dilute, it is apparently more "pure", in the sense that it contains lower relative levels of contaminants than does even the virgin acid originally charged.
- There is a market for the 45-50% rinse-acid for the manufacture of fertilizer. In this service, it is used as a direct substitute for "green acid", an acid of about 75% H<sub>3</sub>P<sub>04</sub> content that is lower in quality (i.e., higher in contaminants) than the rinse-acid (or, of course, the original technical acid that we sell).

Pending resolution of the issues surrounding interpretation of 40 CFR 261.2(e) and 40 CFR 266.20, the anodizer is apparently neutralizing the rinse-acid and sewerage it, because of the possible interpretation that it would have to be stored and shipped as hazardous waste if it is to be used as raw material for

Again, I believe we have the opportunity here for some true Pollution Prevention progress if there is a way to move outside of the world of solid or hazardous wastes. Your interpretation and opinion on this will be most appreciated. Please call at your earliest convenience.

Respectfully yours,

D. B. Redington  
Director, Regulatory Management  
Phone: (314) 694-6503

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

JUNE 4, 1986

Daniel McCaskill  
Vice President  
Distribution Systems & Environmental Affairs  
Van Watels & Rogers Division  
2600 Campus Drive  
Box 5932  
San Mateo, CA 94402

Dear Mr. McCaskill:

You have inquired as to the regulatory status under the RCRA subtitle C regulations of phosphoric acid derived from aluminum anodizing operations which is used subsequently as an ingredient in fertilizer manufacture. You have indicated that phosphoric acid is typically used in fertilizer production, that the phosphoric acid, returned from anodizing is as pure or purer than virgin phosphoric acid, and that the acid returned from anodizing does not contain toxic constituents not ordinarily present in virgin phosphoric acid or present in concentrations ordinarily found in virgin phosphoric acid. You also indicate that the acid is not reclaimed before being used in the fertilizer process. Your question is whether the anodizing phosphoric acid falls under the use constituting disposal provisions of 40 C.F.R. Part 266 Subpart C.

We think this is a difficult question. The general principle in the Agency's regulations is that hazardous secondary materials ultimately applied to the land are hazardous wastes, as are the waste-derived products in which they are contained. See 40 C.F.R. §261.2(c)(1). We do not think that principle applies here under the circumstances outlined above. In essence, we do not think anodizing phosphoric acid that is purer in acid content, and no more contaminated than virgin phosphoric acid can be viewed as a secondary material. Thus, such acid would not be considered a solid or hazardous waste under RCRA when used in the same manner as virgin phosphoric acid.

Sincerely,

Steven E. Silverman  
Attorney  
Solid Waste & Emergency  
Response Division (LE-132S)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

OCTOBER 20, 1986

Mr. A L. Horner  
Environmental Specialist  
Albright & Wilson, Inc.  
P.O. Box 26229  
Richmond, VA 23260-6229

Dear Mr. Horner:

I am writing in response to your request for a written determination as to the regulatory status of 36% phosphoric acid that is generated as part of the chemical polishing of aluminum. /1  
In your letter, you state that this material is an effective substitute for 75% technical grade phosphoric acid and a variety of other potential nutrient materials used in wastewater treatment plants. In addition, you also state that it can be a substitute for 54% P<sub>2</sub>O<sub>5</sub> wet acid used in specialty fertilizer producers.

As you know, 40 CFR 261.2(e) specifies which materials are not solid wastes when they are recycled. Among other things, materials that are used or reused as effective substitutes for commercial products, or materials that are used or reused as ingredients in an industrial process are not solid wastes provided. (1) that these materials are not used in a manner constituting disposal (or used to produce products that are applied to the land), (2) they are not burned for energy recovery (or used to produce a fuel or contained in fuels), or (3) they are not accumulated speculatively. Thus, 36% Phosphoric acid used as wastewater conditioners are not solid waste. (See 50 FR 628, FN 15, January 4, 1985.)

This is also the case (as provided below) for 36% phosphoric acid used to produce fertilizers however, we think this is a more difficult call. In particular, the general principle in the Agency's regulations is that hazardous secondary materials ultimately applied to the land are hazardous wastes, as are the waste-derived products in which they are contained (See 40 CFR §261.2(c)(1).) However, if the anodizing phosphoric acid is purer in acid content, and no more contaminated than virgin phosphoric acid (as it has been described to us), we do not believe 36% phosphoric acid generated as part of the chemical polishing of aluminum that is used to produce fertilizers can be viewed as a secondary material. Thus, such acid would not be considered a solid or hazardous waste under RCRA when used in the same manner as virgin phosphoric acid.

It should be noted that there is a provision in 40 CFR §261.2(f) associated with this exclusion more specifically, you must be able to demonstrate that the 36% phosphoric acid is being used as cited above, and not merely capable of such use or that it has been used for such purposes in the past. I suggest that you keep documentation to support your claim that the 36% phosphoric acid is being used in a manner that is within the scope of this exclusion.

Please feel free to call me if you have any further questions, my telephone number is (202) 475-0551.

Sincerely,

Matthew A. Straus  
Chief  
Waste Characterization Branch

1/ As described in your letter, the process which generates the 36% Phosphoric acid involves the submerging of aluminum parts in phosphoric acid to increase the brightness of aluminum. After the phosphoric acid bath, the parts are rinsed with water; a specifically designed rinse operation is utilized to produce 36% Phosphoric acid.

**Van Waters & Rogers**  
division of **Univar**

May 19, 1986

Mr. Steven E. Silverman  
Environmental Protection Agency  
Office of General Counsel  
Room 503, West Tower  
Mail Drop LE-132S  
401 M. Street, S.W.  
Washington, D.C. 20460

Re: Aluminum Anodizing Rinse Water

Two weeks ago I sought from you, in the interest of our company and customers, an opinion as to whether aluminum anodizing phosphoric acid rinse water constitutes a hazardous waste. This past Friday we discussed the request via phone and you mentioned that an oral opinion had been previously rendered which established that said material was not determined to be a hazardous waste by EPA.

The EPA's oral opinion is respected, valued and significant to our business.

So that we might extend the EPA decision in this matter to our offices and to interested customers, we would appreciate a written confirmation of the oral opinion.

Pursuant to your advice I will briefly outline the commercial sequence of the noted rinse water.

We sell virgin phosphoric acid to anodizers who use the material in a bright dip process to create a shiny finish on aluminum parts. Thereafter, the parts are dipped in a tank of rinse water. The rinse water progressively increases in phos acid content and must be periodically exchanged for fresh water.

The phos acid rinse water has direct commercial value. We purchase the rinse water (in the form of a credit) from the anodizer. The rinse water is not recycled, treated, or in any way altered from the time it is created in the rinse tank until sold as a fertilizer component.

The purity of the rinse water very closely approximates virgin phos acid.

The fertilizer manufacturers using the rinse water typically make up a mixture of approximately 2/3 virgin and 1/3 rinse water. The rinse water is less costly than the virgin material.

As requested, Mr. Silverman, we would appreciate your formal reply in this matter. Thanks for your help.

Sincerely yours,

Daniel McCaskill  
Vice President  
Distribution Systems & Environmental Affairs